Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V (RENEWAL) NO. V-06-034
HOLLINEE, LLC
VANCEBURG, KY
SEPTEMBER 15, 2006
COMPLETED BY: JULIAN BRECKENRIDGE
SOURCE I.D. # 21-135-00018
SOURCE A.I. # 2701
ACTIVITY # APE20060001

SOURCE DESCRIPTION:

The Hollinee Vanceburg facility manufactures cured polyester fiberglass mats. Hollinee primarily uses two types of resin (styrenated and alcohol based (176 resin)). The first step in the process involves simultaneously applying very fine glass strains and polyester resin to a 12-foot long rotating drum. The glass strains are applied from above the drums by a natural gas fired traveling furnace that moves back and forth along the length of the drum. The binder is applied from behind the drum by a traveling spray nozzle that also moves back and forth with the glass-melting furnace. After the desired amount of binder and glass is applied to drum the uncured mat is manually removed from the drum by cutting the mat lengthwise along the drum. The uncured mat is then rolled up and moved to a staging area for further processing in the curing oven. Next, the uncured mat is unrolled onto the natural gas fired letoff table. The uncured mat is stretched over the letoff table and fed into the natural gas fired curing oven. Emissions from the forming drums are uncontrolled.

Prior to the issuance of the original Title V Permit, Hollinee was operating 16 forming drums (No. 001-016) and one curing oven (No. 023). Hollinee has installed six new forming drums (No. 017-022) and a new curing oven (No. 024). Each forming drum includes one 0.15 mmBtu/hr natural gas fired glass-melting furnace and one binder spray applicator. There is no construction associated with permit V-06-034.

All pollutant emissions generated during the production include particulate matter (PM), and primarily volatile organic compounds (VOC) and hazardous air pollutants (HAP) emissions such as mainly styrene and xylene. A wet scrubber controls VOC emissions from the facility. Testing was done on January 26, 2006 for emission unit no. 24 (04), Fiberglass Curing Oven #2. It was performed for particulate matter, total gaseous non-methane organics, and styrene. Emission factors are based on the post-control testing.

DAQ acknowledges receipt on May 2, 2006 of a renewal Title V air quality permit application for Hollinee, LLC in Vanceburg, KY. This represents the first renewal of the Title V air permit. The permit history is summarized as follows:

Permit Revision History

Rev #	Permit Type	Log #	Complete Date	Issuance Date	Summary of Action
---	Initial Issuance	G579 (51359 & 53522)	03/01/01	11/02/01	Title V Air Permit issued for Hollinee Manufacturing Corporation in Vanceburg, KY
---	Renewal Application	NA	09/15/2006	---	Renewal Title V air permit application to operate a manufacturing plant for cured polyester fiberglass mat production at Vanceburg, KY

COMMENTS:

The following is a list of significant emission units with applicable regulations:

a. Emission Units 001 and 022: Twenty-Two Forming Drums (Sixteen Old and Six New) – each has a rotating drum collector, a traveling glass-melting furnace and a binder spray applicator.

   i. 401 KAR 59:010 *New process operations* – applicable limits for particulate matter and visible emissions apply to these facilities. During periods of normal operation of the fabric filter, compliance shall be demonstrated by maximum process rates, proper operation of control equipment, and emission factors for the particulate matter emission limit and EPA Reference Method 9 for the opacity limit.

   ii. 401 KAR 63:020, *Potentially hazardous matter or toxic substances* – resins contain potentially hazardous toxic substances including styrene and xylene, which are HAPs. If units are added or modified, the source may be required to conduct dispersion modeling to demonstrate potential emissions of styrene and xylene do not exceed the reference concentrations (RfC).

   Criteria pollutant and HAP emissions from natural gas combustion and resins are based on current AP-42 tables, stack tests and material balances.

b. Emission Units 023 and 024: Curing Ovens #1 and #2. Each oven has its own letoff table controlled by a conveyor that moves the fiberglass mats into the finishing ovens.

   i. 401 KAR 59:010 *New process operations* – applicable limits for particulate matter and visible emissions apply to these facilities. During periods of normal operation of the fabric filter, compliance shall be demonstrated by maximum process rates, proper operation of control equipment, and emission factors for the particulate matter emission limit and EPA Reference Method 9 for the opacity limit.

   ii. 401 KAR 63:020, *Potentially hazardous matter or toxic substances* – resins contain potentially hazardous toxic substances including styrene and xylene, which are HAPs. If units are added or modified, the source may be required to conduct dispersion modeling to demonstrate potential emissions of styrene and xylene do not exceed the reference

concentrations (RfC).

iii. 40 CFR 64, *Compliance Assurance Monitoring (CAM) plan*. The facility has included a CAM plan that is applicable to the curing ovens #1 and #2 at emission units 023 (02) and 024 (04). The following table summarizes the plan.

Operating Parameter	Operating Range
pH	6-9
Pressure Drop Across the Filter Bed	20-30 inches of water
Pressure Drop Across the Mist Eliminator	<0.75 inches of water
Scrubber Water Pump #1 Pressure	65-100 psia
Scrubber Water Pump #2 Pressure	65-100 psia
Exhaust Gas Temperature	<120°F when the ambient temperature is less than 90°F and no more than 30°F over the ambient temperature when the ambient temperature is greater than 90°F.

Criteria pollutant and HAP emissions from natural gas combustion and resins are based on current AP-42 tables, stack tests and material balances. The emissions of this process operation are emitted through the wet scrubbers known as Anderson Scrubbers.

c. In permit V-01-005, there was an emission limitation for the following emission points: 84 Binder Pump Spray Applicators, 84 Glass-Melting Furnaces (0.15 mmBtu/hr/unit), Fiberglass Curing Oven (7 mmBtu/hr/unit) and Letoff Table (0.3 mmBtu/hr/unit), that stated the following, "To preclude 401 KAR 63:105, Requirements for control technology determinations for major sources in accordance with Clean Air Act section 112(g) and (j) (case-by-case MACT requirements), the increased emissions of Styrene and PM/HAPs from the listed emissions points, below, shall be less than 9 and 22.5 tons, respectively, per 12 consecutive months." Of the total 84 binder pump spray applicators and 84 glass-melting furnaces, only 6 units were installed (emission units 017-022 in permit V-06-034). Referring to the applicable and non-applicable regulations, there are no applicable national emission standards for hazardous air pollutants (NESHAP) regulations for this facility, even at major source levels for emissions of HAPs. Although no NESHAP regulations are applicable, the facility needs to retain an emission limit of VOC less than 39 tpy, PM_{10} less than 14 tpy, and PM less than 24 tpy, to preclude a Prevention of Significant Deterioration of air quality (PSD) significant emissions increase levels from the newly constructed equipment (emission units 017-022, 6 Forming Drums – 6 glass-melting furnaces and binder pump spray applicators, and emission unit 024, Fiberglass Curing Oven #2).

Non-Applicable Regulations:

401 KAR 59:015, *New Indirect Heat Exchangers.* The curing ovens are not indirect heat exchangers.

401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*. Hollinee is a major

PSD source; however, there is no proposed construction or significant emissions increase.

40 CFR 60 Subpart PPP, *Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants*. Hollinee does not manufacture wool fiberglass.

40 CFR 60 Subpart CC, *Standards of Performance for Glass Manufacturing Plants*. Hollinee does not manufacture glass from raw materials but rather melts glass cullet.

40 CFR 63 Subpart HHHH, *National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production.* Hollinee does not produce mineral wool/fiberglass for roof products and does not use urea/formaldehyde resins.

40 CFR 63 Subpart DDD, *National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production.* Hollinee does not produce fiberglass from natural rock, blast furnace slag or other similar materials. It produces fiberglass from melting glass cullet.

40 CFR 63 Subpart NNN, *National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing.* Hollinee does not manufacture wool fiberglass using the spin process.

40 CFR 63 Subpart WWWW, *National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.* Hollinee is not a reinforced plastic composites production facility. It does not engage in open molding, closed molding, centrifugal casting, continuous lamination, continuous casting, polymer casting, pultrusion, sheet molding compound manufacturing and bulk molding compound manufacturing.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.